## Claims

- 1. Shoulder joint prosthesis, characterized by an at least two-piece humeral head prosthesis, composed of a calotte or joint head (3), and an attachment body (5, 7), including a attachment part (15) for the mounting attachment of the calotte, as well as a mounting segment (21) to effect the at least cement-free anchoring of the attachment body within the bone.
- 2. Prosthesis according to Claim 1, characterized in that the attachment body is of an at least two-part design, including a disk-like positioning body (5) having a medial hole, and an anchoring body (7) provided in order to affix the positioning body (5) to the bone through the medial hole (19).
- 3. Prosthesis according to one of Claims 1 or 2, characterized in that the attachment body or anchoring body has a hollow screw.
- 4. Prosthesis according to one of Claims 1 through 3, characterized in that the calotte or joint head (3) has at least one nearly spherical surface (33) corresponding to a spherical section with an opening angle of < 180°.
- 5. Prosthesis according to one of Claims 2 through 4, characterized in that the disk-like positioning body has an at least nearly circular projecting collar (15) with a terminally located, preferably conical support edge, and that a beveled retaining flange (25) is formed on the anchoring body or hollow screw (7) terminally projecting outward to match the support edge so as to rest on or abut the support edge (17) inside the collar (15).
- 6. Prosthesis according to one of Claims 1 through 5, characterized in that the joint head (3) has an at least nearly hollow-cylinder-shaped receiver (31) on the side opposite the spherical surface (33), provided to mount the joint head on the attachment body.

- 7. Prosthesis according to Claim 6, characterized in that the wall (35) of the hollow-cylinder-shaped receiver (31) and the external surface of the collar (15) of the positioning or pressure disk (5) is of a slightly conical or beveled design so as to provide a form-locking and positionally correct mounting of the joint head over the collar (15).
- 8. Method of fitting a shoulder joint prosthesis according to one of Claims 1 through 7, characterized in that an attachment body (5, 7) is first fitted on the previously prepared bone, after which the joint head or calotte (3) is fitted on the attachment body.
- 9. Method according to Claim 8, characterized in that first a disk-like positioning body, such as a positioning or pressure disk (5), is attached at a predetermined position to the pretreated bone, wherein a provisional positionally-correct fixation is provided by hooks or projections (13) protruding from the disk, after which the positioning or pressure disk is anchored or fixed to the bone by a hollow screw which is inserted through a medial hole in the disk.
- 10. Method according to one of Claims 7 or 8, characterized in that the joint head is fitted on the fitted attachment body which has a slightly conically-shaped collar (15) protruding from the bone by an approach in which the hollow-cylinder-shaped receiver on the inside of the joint head, which receiver also has a slightly conically-shaped wall (35), is mounted in a form-locking manner over the collar; and that finally the joint head is definitively fastened or fixed by applying a force to its external surface.